



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,819	10/04/2001	Mikko Oikkonen	4925-30PUS	6311
30542 7590 03/23/2009 FOLEY & LARDNER LLP P.O. BOX 80278 SAN DIEGO, CA 92138-0278				
EXAMINER				
DENNISON, JERRY B				
ART UNIT		PAPER NUMBER		
2443				
MAIL DATE		DELIVERY MODE		
03/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/868,819

**Applicant(s)**

OLKKONEN ET AL.

**Examiner**

J Bret Dennison

**Art Unit**

2443

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1, 4-10, 12-25 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-10, 12-25 and 27-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

1. This Action is in response to Application Number 09/868,819 received on 1/02/2009.
2. Claims 1, 4-10, and 12-25, and 27-29 are presented for examination.
3. Claims 28-29 are newly presented independent claims.
4. Claims 2-3, 11, and 26 have been canceled.

### ***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim(s) 10, 29 recite a "storage medium". Applicant's Specification does not provide the proper antecedent basis for this terminology.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim(s) 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 16 includes the limitation, "wherein said forming of a header for said IP protocol datagram is based at least partly on a time slot number that at least one of said first and second network nodes knows associate with data which is transferred in the IP protocol datagram". It is unclear to Examiner what is meant by "a time slot number that at least one of said...nodes knows associate with data".

Claim 18 includes the same issue as claim 16.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 4-10, and 12-21, 24-25, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkes et al. (U.S. 6,438,124).

9. Regarding claim 1, Wilkes disclosed a method comprising:

transmitting data over a data transmission network from a first circuit switched transmission line through a first circuit switched network node (Wilkes, Figs. 2 and 10, elements 30, 31, and 32) towards a second circuit switched transmission node that is coupled to a second circuit switched transmission line (Wilkes, Figs. 2 and 10, elements 34, 31, and 38), comprising:

employing, in the data transmission network, an IP protocol for transmissions from said first circuit switched network node, which receives data from said first circuit switched transmission line, towards said second circuit switched network node, said data being destined for transmission into said second circuit switched transmission line (Wilkes, Fig. 10, Internet 16; col. 3, lines 49-50, transmitting TCP/IP packets);

using an IP protocol datagram to transmit data received from the first circuit switched transmission line towards the second circuit switched network node (Wilkes, col. 3, line 59 through col. 4, line 4).

Wilkes disclosed the VoiceEngine acts as a multiplexer for simultaneously sending a signal to a plurality of VoiceEngines from a single VoiceEngine as well as for simultaneously receiving a signal from a plurality of VoiceEngines at a single VoiceEngine (Wilkes, Fig. 9A and 9B). Wilkes also disclosed the VoiceEngines are also capable of multiplexing many voice connections on a single Internet connection (col. 8, lines 22-25). Wilkes also disclosed the VoiceEngines preparing the data for transmission via the Internet by creating discrete packets which are routed to the complementary VoiceEngine, and the complementary VoiceEngine reconstructs the message (Wilkes, col. 7, line 60 through col. 8, line 2);

forming a header for said IP protocol datagram based at least partly on circuit switched channel identifying parameters, which identify at least one channel in the second circuit switched transmission line, and an IP protocol address of the second network node (Wilkes, Fig. 2, col. 3, lines 45-55, Wilkes disclosed a voice Internet transmission system in which voice data is transferred from one PSTN across the internet using IP packets to a second PSTN, which would require each PSTN to obtain circuit switched channel identifying parameters with the packets in order to properly interpret the voice data; Figure 10 shows that a Receiving Voice Engine 34 can handle multiple calls between multiple telephones, which clearly represent multiple channels in the PSTN, and therefore, the received packets must identify which channel the packet

belongs to for the PSTN to properly transmit the voice data to the proper telephone, as Wilkes disclosed at col. 6, lines 60-65).

Wilkes further disclosed that each VoiceEngine are capable of multiplexing many voice connections on a single Internet connection (Wilkes, col. 8, lines 22-28).

Wilkes did not explicitly state indicating within said IP protocol datagram separately for each of a plurality of time slots known to at least one of said first and second circuit switched network nodes, whether the IP protocol datagram carries data belonging to a channel corresponding to the time slot, so that when it is indicated that the IP protocol datagram does not carry data belonging to a channel, the second circuit switched network node is allowed to receive data to that channel from other sources from an IP-network in a non-consecutive manner.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that each header of each packet sent by the initiating VoiceEngine identifies which voice connection the packet belongs, as well as which time slot the voice data corresponds. Otherwise, the multiplexing of the packets from the multiple voice connections would result in packets being incorrectly used in reconstructing each message for transmitting to the receiving end, resulting in mixed streams which do not make any sense. It is well known in the art for the header of a packet in a data stream to include sequencing information as well as other control information in order for the receiving end to be able to determine what the packet data is. As shown above, since the VoiceEngines multiplex multiple voice connections going to multiple telephones at each end, it is clear that such would require packets belonging

to multiple voice connections, requiring the VoiceEngine to separate them according to the proper channel that they should go on, thereby allowing the VoiceEngine to receive data to that channel from other sources from an IP-network in a non-consecutive manner.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within each packet header, time slot and sequencing information in order for the receiving end to successfully be able to determine which stream the packet belongs, as well as what piece of the voice data the packet corresponds to, in order for the stream to successfully be transmitted and understood at the receiving end.

10. Claims 10 and 27 and 19 include a network element with limitations that are substantially similar to the limitations of claim 1. Wilkes disclosed a network element as claimed (Wilkes, Fig. 2, 32, 34). Claims 27 and 19 further includes the network element configured to insert a number of samples from said at least one channel of a transmission line into a payload portion of a data packet. Wilkes clearly disclosed this by transmitting the call over the IP network. Such a transmission would require inserting samples from the channel into the payload portions of packets. Claim 28 includes a method with limitations that are substantially similar to claim 1. Claim 29 includes a network element with limitations that are substantially similar to claim 1.

11. As such, claims 10 and 19, 27-29 are rejected under the same rationale.

12. Regarding claim 4, Wilkes disclosed the limitations as described in claim 1, including wherein data from at least one channel of the first circuit switched transmission line is transmitted as compressed data over the data transmission network (Wilkes, col. 7, lines 60-65).

13. Regarding claims 5 and 12, Wilkes disclosed the limitations as described in claims 4 and 10. Wilkes disclosed decompressing the transmitted data and executing digital to analog conversion (Wilkes, col. 8, lines 1-7). Wilkes also disclosed the purpose for compression is to meet the requirements of real-time conversation speeds. Wilkes did not explicitly state wherein only compressed speech signal parameters of a signal received from said at least one channel of the first circuit switched transmission line are transmitted over the data transmission network; wherein said received signal comprises an uncompressed speech signal part and compressed speech parameters. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compress portions of each data packet to meet the requirements of real time conversion speeds.

14. Regarding claim 6, Wilkes disclosed the limitations as described in claim 4, including wherein the received signal of said at least one channel of the first circuit switched transmission line is compressed in the first network mode (Wilkes, col. 7, lines 60-65).



15. Regarding claim 7, Wilkes disclosed the limitations as described in claim 4, including wherein compressed speech parameters received from the first network node are decompressed into an uncompressed speech signal before transmission into the second circuit switched transmission line (Wilkes, col. 8, lines 1-7).

16. Regarding claim 8, Wilkes disclosed the limitations as described in claim 1, including wherein samples of data from more than one channel of the first circuit switched transmission line over the data transmission network in one IP protocol datagram (Wilkes, col. 8, lines 21-25).

17. Regarding claim 9, Wilkes disclosed the limitations as described in claim 1. Wilkes did not explicitly state transmitting a message which describes supported coding modes for compressed speech parameters from the first network node to the second network node and describing said supported coding modes in said transmitted message in an order of preference for optimizing speech data transmission. However it would have been obvious to one of ordinary skill in the art at the time the invention was made to include communication control messages between the VoiceEngines of Wilkes in order for the VoiceEngines to be on the same page and follows the same protocols and parameters in order to successfully communicate the voice data that both ends can properly interpret, for the benefit of reducing the amount of errors in transmission.

18. Regarding claim 13, Wilkes disclosed the limitations as described in claim 10, including wherein the network element comprises a compression unit for compressing a signal of at least one channel of the circuit switched transmission line before transmission over the data transmission network (Wilkes, col. 7, lines 60-67).

Regarding claims 14 and 17, Wilkes disclosed the limitations as described in claims 1 and 10, including inserting status information into the datagram (Wilkes, col. 6, lines 59-67).

19. Regarding claim 15, Wilkes disclosed the limitations of claim 14. Wilkes did not explicitly state wherein said status information comprises at least an indicator to indicate activity of the at least one channel, a length of samples of the at least one channel and whether channel information definition is comprised in the datagram. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include control parameters to indicate status information such as the activity of the channel, length of the samples and whether the channel information is comprised in the datagram in order to notify the receiving end of how to handle the content of the datagram. Such status information is crucial in successfully transmitting the voice data in real time, for example, the length of a sample provides information necessary for the receiving end to determine sequencing information for the voice data in the stream.

20. Regarding claim 16, Wilkes disclosed the limitations as described in claim 1. Wilkes did not explicitly state wherein said forming of a header for said IP protocol datagram is based at least partly on a time slot number that at least one of said first and second network nodes knows associate with data which is transferred in the IP protocol datagram.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the packet data in the packets must be based on a time slot number in order to successfully transfer across the Internet and be able to put all data back together to create a proper voice message.

21. Regarding claim 18, Wilkes disclosed the limitations as described in claim 10

Wilkes did not explicitly state wherein the network element is configured to determine said IP protocol address based at least partly on a time slot number that at least one of said first and second network nodes knows associate with data which is transferred in the IP protocol datagram.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the packet data in the packets must be based on a time slot number in order to successfully transfer across the Internet and be able to put all data back together to create a proper voice message.

22. Regarding claim 20, Wilkes disclosed the limitations as described in claim 1, including transmitting the number of time slots in the corresponding frame (Wilkes, col. 8, lines 22-25).

23. Regarding claim 21, Wilkes disclosed the limitations as described in claim 28, including receiving data of different time slots of a single PCM trunk line from different packet network gateways (Wilkes, Fig. 9B, 32).

24. Regarding claim 24, Wilkes disclosed the limitations as described in claim 28, including wherein the destination packet network gateway acts as said second circuit switched network node and receives data destined to a group of channels in the second circuit switched transmission line from another packet network gateway (Wilkes, col. 8, lines 22-26).

25. Regarding claim 25, Wilkes disclosed the limitations as described in claim 28, including wherein said second circuit switched network node receives data destined to individual channels in the second circuit switched transmission line separately from one or more other sources, such as IP telephones (Wilkes, col. 9, lines 56-67).

26. Claim 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkes in view of Rose (U.S. 6,449,278).

27. Regarding claim 22, Wilkes disclosed the limitations as described in claim 1. Wilkes did not explicitly state wherein a first packet network gateway acts as said first circuit switched network node and sends data to a second packet network gateway that acts as said second circuit switched network node, and said first packet network gateway uses headers of transmitted IP protocol datagrams to identify time slots 5 to 10 of a PCM trunk line operating at least at the rate 2048 kbit/s as destinations of transmitted data at said second packet network gateway.

In an analogous art, Rose disclosed an exchange for communication between distributed nodes for processing calls in which, normally, the signaling data link for time-slots is 2048 kbit/s PCM system (col. 2, lines 24-30).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wilkes and Rose to obtain the predictable results of transmitting data to time slots at the normal rate of 2048 kbit/s.

28. Regarding claim 23, Wilkes and Rose disclosed the limitations as described in claim 22, including wherein a third packet network gateway is arranged to send data to the second packet network gateway and to use headers of transmitted IP protocol datagrams to identify the rest of the time slots of the same PCM trunk line as destinations of data transmitted from said third packet network gateway to said second packet network gateway (Wilkes, col. 9A, 32).

#### **Response to Amendment**

Applicant's arguments and amendments filed on 6/26/2008 have been carefully considered but they are not deemed fully persuasive

In response to applicant's argument that the references fail to show transparency to the user, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the packets sent in Wilkes do not include channel identifying parameters. Applicant attempts to explain this by pointing out that there is only a single extension line [Response, page 14].

Examiner respectfully disagrees.

As shown in the rejection, and as indicated in Fig. 10, each VoiceEngine is able to multiplex multiple voice communications at one time coming across the internet, and in order to properly multiplex the voice communications, i.e. separate which packets go with which voice communications, there must be channel identification parameters provided with the packets. Otherwise, messages would be scrambled and nothing would make sense, which entirely defeats the purpose of the invention of Wilkes.

Applicant argues that the teachings of Wilkes does not require time slot structure [Response, page 14].

Examiner respectfully disagrees.

With reference to the explanation above regarding multiplexing of multiple voice communications, as well as with reference to the fact that the data is "voice data", the

only way such voice data to be properly transmitted across an IP network would have to be through packets which split up the voice data, and at the receiving end, must be put back together in the proper way, i.e. time slots. Each packet represents a time slot of the voice communication.

In response to Applicant's argument that Wilkes is unable to allow the receiving voice engine to receive data to some channel from other sources, Examiner respectfully disagrees. As described above, the VoiceEngines of Wilkes multiplex multiple voice communications at once and must send them off to each of their own telephone lines. Also, it is shown by the FigureSuch would require the voice engine to be allowed to receive data to some channel from other sources. There is also nothing in Wilkes that limits what data the VoiceEngine can receive.

It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Examiner notes that with respect to claim 23, an inadvertent typographical error was made in the previous office action regarding the placement of the rejection for this claim. It is clear that the placement should have been grouped with that of claim 22, based on its dependency of claim 22. The placement has been corrected.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not



mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/J Bret Dennison/  
Primary Examiner, Art Unit 2443